

AMENDMENTS TO THE SPECIFICATION

IN THE SPECIFICATION:

Please amend the paragraph beginning on page 1, line 10, as follows:

--Generally, isotropy quality of a golf club shaft determines a dynamic balance character for striking. The more the golf club shaft has a high character of dynamic balance, the more it accomplishes a striking aspect, such as a striking accuracy and a striking distance. It means that a high character of dynamic balance minimizes a lateral component of force (lateral deformation) and vibration. However, a conventional manufacture method cannot ensure perfect straightness and isotropy of the golf club shaft, particularly a carbon fiber shaft. Accordingly, somewhat of some non-isotropy of the golf club shaft is inevitable and that results in somewhat some unbalance of the dynamic balance character. To this end, a golf club shaft must be measured measure its isotropy on a circle with respect to an axis prior to combining being combined with a golf club head. An operator determines a desired striking direction of the golf club shaft by measuring and searching a minimum lateral component of force, and it. This is regarded as a reference of striking aspect for improvement.--

Please amend the paragraph beginning on page 2, line 20, as follows:

--Although the above-mentioned method is widely used in the industry, it ~~is prolonged~~prolongs the process time ~~of~~for testing. In addition, a track of the vibrational movement of the golf club shaft 10 cannot be confined within a single degree of freedom due to its non-isotropy. Accordingly, observing the track of the golf club head 10, it is gradually changed to a rotation from a straight-line motion that may result in an error of the observational measure and fail to determine an exact direction of isotropy. Hence, there is a need for an improvement of the dynamic balance-testing method for a golf club shaft.--

Please add the following paragraph after the paragraph ending on page 4, line 18:

--Further scope of the applicability of the present invention will become apparent from the detailed description given hereinafter. However, it should be understood that the detailed description and specific examples, while indicating preferred embodiments of the invention, are given by way of illustration only, since various changes and modifications within the spirit and scope of the invention will become apparent to those skilled in the art from this detailed description.--

Please amend the paragraph beginning on page 4, line 20, as follows:

--The present invention will now be described in detail with reference to the accompanying drawings-, which are given by way of illustration only, and thus are not limitative of the present invention, and wherein:--

Please amend the paragraph beginning on page 6, line 8, as follows:

--Referring initially to FIGS. 2 and 3, a dynamic balance-testing method for a golf club shaft in accordance with the present invention comprises a first step that fixed a first end of a golf club shaft 10. A clamper 20 is used to securely mount the first end of the golf club shaft 10 which has a second end ~~for following measuring process.~~ In use, the second end of the golf club shaft 10 has a relatively thin diameter, which is regarded as a striking end to ~~combine~~be combined with a golf club head (not shown). The golf club shaft 10 has an axle extended between the first end to the second end in a longitudinal direction, and a radially outer circumference provided with at least twelve predetermined angular directions P1 through P12. Each direction has an opposite direction along a straight line which runs through the axle of the golf club shaft 10, such as P1 corresponding to P7, P2 corresponding to P8. Preferably, a protractor (not shown) is provided on the golf club

shaft 10 for ~~accurately~~accurate axial rotation. In clamping operation, the golf club shaft 10 is able to rotate along its axle for measuring process. Preferably, the clamped 20 has an alignment means, such as position marks P1, P2... P12, to determine an exact direction of the predetermined angular directions P1 through P12 of the golf club shaft 10.--

Please amend the paragraph beginning on page 7, line 6, as follows:

--Still referring to FIGS. 2 through 3A, the dynamic balance-testing method for a golf club shaft in accordance with the present invention comprises a second step that measures reacting forces of a constant displacement of the second end of the golf club shaft 10 in the first angular direction P1 with respect to its axis. A dynamometer 30 includes a movable end 31 and a slot 32 thereof. The movable end 31 is able to move a predetermined distance D while the slot 32 ~~mounting~~holds the second end of the golf club shaft 10, as shown in FIG. 3. In measuring operation, subsequent to the clamper 20 fixing the first end of the golf club shaft 10 along the direction P1, the second end of the golf club shaft 10 is rotatably received in the slot 32 of the dynamometer 30. Subsequently, the movable end 31 of the dynamometer 30 forces the second end of the golf club shaft 10 to bend a predetermined constant displacement D, thereby elastically bending the entire golf club shaft 10 along a

line running from the direction P1 to the opposite direction P7. Namely, the constant displacement of the golf club shaft 10 can be confined within a single degree of freedom, as shown in FIGS. 3A. ~~In-When static, the second end of the golf club shaft 10 performs has a~~ reacting force acting on the dynamometer 30. Consequently, ~~it can be retrieved data of reacting force data~~ in the direction P1 of the golf club shaft 10 can be retrieved for the calculating process.--

Please amend the paragraph beginning on page 8, line 6, as follows:

--Turning now to FIGS. 3 and 3B, the dynamic balance-testing method for a golf club shaft in accordance with the present invention comprises a third step that turns the golf club shaft 10 for measuring reaction force of the other directions P2-P12 successively by the dynamometer 30. Preferably, the clamper 20 is provided with an adjusting member that allows ~~rotating~~rotation of the golf club shaft 10 and accurately ~~positioning~~positions it at various directions P1-P12 according to the protractor. Since data of reacting force of the golf club shaft 10 can be automatically ~~collect~~collected, it can effectively shorten ~~time of~~ the measuring process effectivelytime.--

Please amend the paragraph beginning on page 9, line 8, as follows:

--Turning now to FIGS. 2 and 5, the dynamic balance-testing method for a golf club shaft in accordance with the present invention comprises a fifth step that determines a preferred balance direction according to the minimum difference of reacting force and thus selects a preferred striking direction perpendicular to the balance direction of the golf club shaft 10 ~~for assembling~~. If a minimum difference of reacting force is located on a line running from the direction P4 to the opposite direction P10, the isotropy character between the two opposite directions P4 and P10 is ~~become~~-excellent. It can be found that a direction along the two opposite directions P4 and P10 is regarded as a preferred balance direction of the golf club shaft 10 for assembling a golf club head 40. Consequently, a preferred striking direction of the golf club shaft 10 is consistent with a line running along the two directions P1 and P7 that is perpendicular to that of the two directions P4 and P10. Namely, when the golf club is swinging along the striking direction of P1 and P7, the isotropy character between the two opposite directions P4 and P10 affects little lateral vibration of the golf club shaft 10. As a result, the golf club shaft 10 ~~accomplishes an~~ has excellent striking ~~aspects~~ aspects such as a striking accuracy and a striking distance.--

Please amend the paragraph beginning on page 10, line 6, as follows:

--The dynamic balance-testing method for a golf club shaft in accordance with the present invention can employ an automatic control system and an appropriate interface card to control the clamper 20 and the dynamometer 30 which may rotate, fix, bend and measure the golf club shaft 10 automatically. Thereby, the present invention ~~accomplishes~~ accurately ~~determining~~ determines dynamic balance character and ~~speeding~~ speeds the entire process.--

Please amend the paragraph beginning on page 10, line 12, as follows:

--Referring again to FIGS. 1 and 3, the conventional dynamic balance-testing method may prolong the process time of testing and fail to determine an exact striking direction of the golf club shaft. In comparison with the conventional method, the present invention employs the dynamometer 30 which ~~accomplishes~~ accurately ~~determining~~ determines dynamic balance character and ~~speeding~~ speeds the entire process.